

**Listing of Claims**

Claim 1 (Original). A blood processing system comprising

- a filter for removing leukocytes from blood,
- first and second fluid pressure actuated pump stations, and
- a fluid pressure actuator operating to selectively apply fluid pressure pump strokes in tandem to the first and second pump stations to convey fluid from a source to the filter, the fluid pressure actuator including a control function to switch between a first flow mode, in which the pump strokes draw a fluid volume into the first pump station from the source and expel a fluid volume from the second pump station to the filter, and a second flow mode, in which the pump strokes draw a fluid volume into the second pump station from the source and expel a fluid volume from the first pump station to the filter, the control function operating to synchronize the pump strokes so that fluid flow from the source is essentially continuous while fluid flow to the filter is pulsatile.

Claim 2 (Original). A system according to claim 1

- wherein the source comprises a blood collection container.

Claim 3 (Original). A system according to claim 2

- wherein the blood collection container receives blood from a blood separation device.

Claim 4 (Original). A system according to claim 1

wherein the first and second fluid pressure actuated pump stations apply positive and negative fluid pressure.

Claim 5 (Original). A system according to claim 1

wherein the first and second fluid pressure actuated pump stations apply positive and negative pneumatic pressure.

Claim 6 (Original). A system according to claim 1

wherein the filter communicates with a blood collection container located in a downstream flow direction to receive blood after passage through the filter.